

EXHIBIT 11

DECLARATION OF ELIZABETH PELOSO

I, Elizabeth Peloso, declare as follows:

1. I am the Senior Associate Vice President and Senior Associate Vice Provost for Research at the University of Pennsylvania (“UPENN”) in Philadelphia, Pennsylvania. I have held that position since July 1, 2024. I previously served as the Associate Vice President and Associate Vice Provost for Research from January 1, 2014 until July 1, 2024.

2. As Senior Associate Vice President and Senior Associate Vice Provost, I have personal knowledge of the contents of this declaration, or have knowledge of the matters based on my review of information and records gathered by UPENN personnel, and could testify thereto.

3. UPENN receives substantial annual funding from the Department of Energy (“DOE”). As of April 10, 2025, our Department of Energy Portfolio include 63 awards with total awarded dollars of \$36,799,534. The current remaining balance on these awards is \$23,699,005, with an expected indirect cost recovery of \$7,276,290.

4. The funding UPENN receives from DOE supports critical and cutting-edge research, which millions of Americans benefit from and depend on, and which is critical to the United States’ technological dominance and national security. For example:

- Penn researchers are developing next generation scientific machine learning architectures to build digital twins of earth and embedded systems. This research is designed to integrate machine learning into the large legacy simulation systems ubiquitous across DOE, allowing AI to be applied in high-consequence national security settings.
- Another project focuses on developing advanced graph network architectures that preserve physical structure in extreme environments representative of national security problems and weapons design at DOE (plasma physics, detonation, and multiscale materials). This work is actively being adopted within DOE to support classified National Nuclear Security Administration work.

- In the Stelfoundary project, UPENN researchers are constructing a digital twin of a fusion power plant in the stellarator configuration. This is crucial to provide near real time prediction of stellarators for control and design. This work supports American energy independence, as DOE and the government begins the commercialization of fusion power.
- UPENN also has a subcontract with Sandia National Laboratories developing tools for autonomous material discovery for 3D printed nanoparticle inks to be used in flexible electronics. The ability to rapidly characterize and prototype new inks and materials is important for national-security applications involving critical materials for weapons design. This project provides foundational algorithmic advances that the labs are using in their stockpile stewardship program.
- Another DOE funded project is developing techniques to quantify uncertainty in physical subsystems coupled across scales. The project specifically focuses on battery design in hostile environments, collaborating with national laboratories partners to support their national security mission.
- UPENN's quantum computing research, funded by the DOE, contributes to MACH-Q, a project developing a modular, error-aware quantum software stack to support hybrid and distributed quantum computing across diverse hardware platforms. By enabling scalable and reliable quantum computing for DOE science applications, MACH-Q strengthens U.S. leadership in quantum information science, accelerates innovation in energy and materials research, and ensures national competitiveness in the emerging quantum economy."
- UPENN is developing optically-controlled gate drivers and sensor modules to upgrade existing power substations with faster, more intelligent switching and protection capabilities. This research is performed in part at the Singh Center of Nanotechnology, a facility which is supported through indirect cost recovery. Leveraging cutting-edge, U.S.-led advances in photonics, microelectromechanical systems, and semiconductor technology, this work enhances the resilience and response speed of the electric grid—ensuring more reliable power delivery to U.S. households during extreme weather events while supporting the integration of both renewable and conventional energy sources.
- Another UPENN project funded by the DOE aims to enable 3D monolithic on-chip, photonics-electronics integration for low-energy production and operation and co-designing radiation hardness into photonic and electronic circuits. It is also performed at the Singh Center of Nanotechnology, which again is a facility supported through indirect cost recovery.

- UPENN carries out research in building mass-manufacturable sensors for monitoring large areas of the deep ocean. The data produced by these sensors directly benefits the public by improving weather models and climate forecasts as well as aiding Naval submarine communication, detection, and navigation. This research is also performed at the Singh Center of Nanotechnology.
- UPENN's work on quantum materials includes pioneering and ongoing studies into and development of topological insulators. This entirely new class of materials was discovered by UPENN physicists and has applications ranging from low power electronics to topological quantum computing, critical to United States' technological dominance and national security.
- UPENN researchers' work on fundamental quantum physics includes key contributions to and roles in high energy physics and neutrino experiments. These enable the discovery of new physical laws and their associated technological applications and, in the case of neutrinos, contribute to American nuclear non-proliferation efforts.

5. Indirect costs are essential for supporting this research. The DOE's proposal to cut indirect cost rates to 15% would end or seriously jeopardize all of the research projects described in paragraph 4 of this Declaration.

6. Indirect costs make it possible for UPENN to obtain highly specialized equipment, such as that housed at the Singh Center for Nanotechnology, which is described above in paragraph 4. The Singh Center for Nanotechnology includes advanced nanofabrication equipment, specialized air handling, and clean rooms, each of which is essential to the performance of a number of research initiatives described above in paragraph 4. Without this equipment, UPENN would not be able to conduct the research.

7. Physical space costs are one of the largest components of what is covered by indirect costs, and the nature, quality and amount of space available to researchers has a direct and obvious impact on the research that can be done at UPENN.

8. In addition, indirect costs fund the administration of awards, including staff who ensure compliance with a vast number of regulatory mandates from agencies such as DOE. These

mandates serve many important functions, including ensuring research integrity; properly managing and disposing of chemical and biological agents used in research; preventing financial conflicts of interest; managing funds; preventing technologies or national security expertise from being inappropriately accessed by foreign adversaries; and providing the high level of cybersecurity, data storage, and computing environments mandated for regulated data.

9. Recovery of UPENN's indirect costs is based on predetermined rates that have been contractually negotiated with the federal government.

10. Through fiscal year 2027, the predetermined indirect cost rates contractually negotiated between UPENN and the federal government are 62.5% for on-campus research.

11. The impact of a reduction in the indirect cost rate would be harmful. Of \$38 million in DOE funding awarded to UPENN between 2020 and 2025 on still-active projects, the remaining balances of approximately \$24 million was allocated with \$16.5 million in direct costs and \$7.3 million for indirect costs.

12. If—contrary to what UPENN has negotiated with the federal government—the indirect cost rate is reduced to 15%, that would reduce UPENN's anticipated annual indirect cost recovery on the currently funded Department of Energy from \$7,276,290 to \$1,900,854.

13. This reduction will have deeply damaging effects on UPENN's ability to conduct research from day one. Most critically, it will necessarily and immediately result in staffing reductions across the board. For example, UPENN currently has more than 100 researchers funded on DOE projects including undergraduate students, post-doctoral trainees, and more than 50 graduate students. Loss of funding may jeopardize the ability of these young engineers and scientists to complete their training. Ultimately, loss of funding will jeopardize UPENN's ability

to sustain, support, and develop the U.S. workforce needed to remain competitive in emerging technologies critical to U.S. national security.

14. UPENN has for decades relied on the payment of indirect costs. Furthermore, until now, UPENN has been able to rely on the well-established process for negotiating indirect cost rates with the government, and relying on those predetermined, negotiated rates to remain static so as to inform our budgeting and planning. Operating budgets rely on an estimate of both direct and indirect sponsored funding to plan for annual staffing needs (*e.g.*, post-docs, PhD students, and other research staff), infrastructure support (*e.g.*, IT networks, regulatory compliance, and grant management support), and facility and equipment purchases. And in some cases, UPENN has long-term obligations—for example, UPENN commits to funding PhD students in the sciences for the full length of their degree programs and relies on budgeted grant funding, including associated indirect cost recovery, to fulfill these commitments.

15. Disruptions to UPENN’s research will also have negative effects in the Philadelphia area, the state of Pennsylvania, and the broader region. UPENN directly employs 53,000 people and indirectly supports an additional 53,000 jobs in construction-related industries, professional services, as well as retail and manufacturing industries via UPENN activities. In FY24 Penn’s research investments generated:

- \$2.5 billion in total annual output within Philadelphia, supporting 9,400 jobs and \$875 million in employee compensation.
- \$2.9 billion in total annual output within the Penn Region, supporting 11,200 jobs and \$996 million in employee compensation.
- \$2.8 billion in total annual output within the Commonwealth of Pennsylvania, supporting 10,800 jobs and \$964 million in employee compensation.

16. UPENN collaborates with state and local partners to help solve regional challenges through joint research and innovation. UPENN's research also fuels spending in the regional economy, including by driving discoveries that launch new ventures, attract private investment, and make a positive social impact. A massive reduction in UPENN's research budget would immediately and seriously jeopardize these contributions to the local region.

17. Finally, slowdowns or halts in research by UPENN and other American universities will allow competitor nations that are maintaining their investments in research to surpass the United States on this front, threatening both the national security and economic dominance of the United States. Specific examples of UPENN research funded by the Department of Energy with implications for advanced technology and national security have already been described in paragraph 4 of this Declaration.

18. Nor can UPENN cover the funding gap itself. While UPENN maintains an endowment, it is neither feasible nor sustainable for UPENN to use endowment funds or other revenue sources to offset shortfalls in indirect cost recovery, for several reasons:

- 46% of UPENN's endowment is restricted to specific donor-designated purposes, such as scholarships, faculty chairs, and academic programs. UPENN is not legally permitted to use those funds to cover research infrastructure costs.
- Even the portion of the endowment that is unrestricted is subject to a carefully managed annual payout, typically around 5%, to ensure long-term financial stability for the institution. Furthermore, UPENN already spends 6% of its consolidated endowment on research.
- As a non-profit institution, UPENN reinvests nearly all of its revenue into mission-critical activities, leaving little margin to absorb unexpected funding gaps. In other

words, unlike for-profit organizations, UPENN does not generate significant surpluses that could be redirected without impacting core academic priorities such as educational programs and financial aid support for students.

19. Moreover, absorbing the cost of a lower indirect cost rate, even if it were possible, would create long-term budget pressures on UPENN—which would in turn force reductions in key investments UPENN’s faculty, students, staff, research, and teaching infrastructure, as well as other critical activities needed to maintain UPENN’s academic excellence.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 13, 2025, at 3451 Walnut Street, Philadelphia, PA 19104

**Elizabeth D
Peloso**

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Elizabeth D Peloso
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Elizabeth D. Peloso